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The Rise of Panarchy

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The Rise of Panarchy

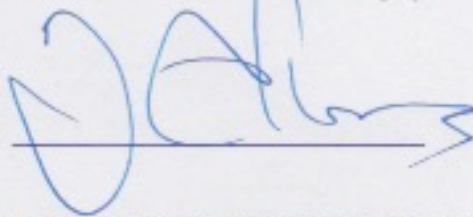
A Capstone Project Submitted in Partial Fulfillment of the
Requirements of the Renée Crown University Honors Program at
Syracuse University

Connor Hakan

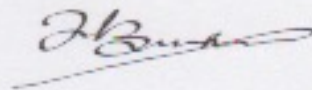
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Honors Capstone Project in Political Science

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Abstract

“The youth of humanity all around our planet are intuitively revolting from all sovereignties and political ideologies. The youth of Earth are moving intuitively toward an utterly classless, raceless, omnicooperative, omniworld humanity.” - R. Buckminster Fuller

In the future, human beings will transcend from a one planet species to a multi-planet species. When human beings are a multi-planet species, a new form of government will rise above the old republics of democracy. This new form of government is called Panarchy. Robert David Steele is a former CIA officer, and in his book, *The Open-Source Everything Manifesto*, he defines Panarchy as - “An ideal condition in which every individual would be connected to all relevant information and able to participate in every decision of interest to them, from local to global (Steele, 2012).”

Panarchy is a form of government with a foundation of citizens who have reached self-actualization. Decisions are made through direct democracy. While there is no formal leadership structure of government, natural leaders wield the power to influence the direction of society.

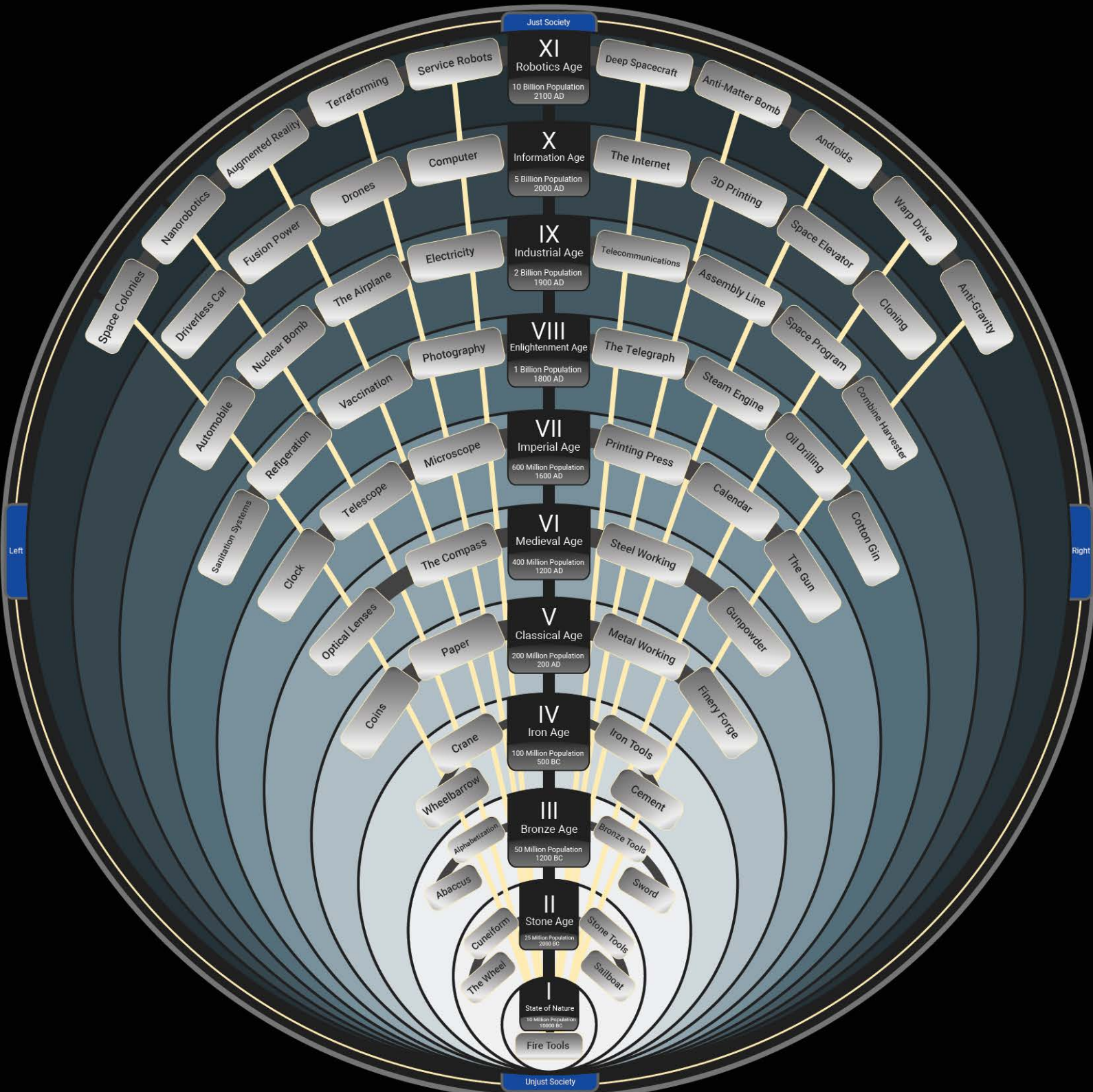
Executive Summary

My view is Panarical societies will flourish on on a Utopian foundation of civilization. The first true panarical civilizations will not start developing until around the year 2300. At this point in time, humanity will have the technology necessary to support Panarchy. We are currently in the Information Age, as our modern technology is currently focused on the transmission of communications over the internet. The internet is the foundational technology for the information age, just at electricity was the foundational technology for the industrial age. Advanced robotics will be the foundation for the next age after the Information Age. In their book, *The Second Machine Age*, Erik Brynjolfsson and Andres McAfee outline how powerful machines were the foundation of the industrial age, and robotics will be just as an influential foundation for a new age in the future. The combination of technology and establishment of new nation states could bring about a new form of government called Panarchy.

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The Rise of Panarchy



Chapter 1

What is Panarchy?

Panarchy is a form of government for highly advanced human civilizations. In the future, human beings will require a new form of government in order to allow their societies to flourish.

Emie de Puydt, a Belgian botanist and economist in 1860, created the term Panarchy as a complete integrated governance that encompasses all other forms of organization (Puydt 1860).

Government is a reflection of a society's moral sentiments and technological power. Depending on the strength or weakness of these two factors, the form of government that allows humanity to flourish is a reaction to these determinants.

If moral sentiments and technological power are both held in a very high state of excellence, society will flourish in a state of panarchy.

Political decisions are made through direct democracy. Citizens in a state of panarchy hold moral sentiments in a very high state of excellence and are self-actualized. As a result, the citizens resemble a group of geniuses. When a society's citizens have so many great people, everyone is allowed equal input on all decisions that control the direction of a society.

Chapter 2

Who Controls Panarchy?

In a state of Panarchy, there is no direct central power source of government. As governments tend to advance through the ages, power centers are diffused among more and more centrals. When humanity reaches panarchy, there will not be a central power structure or leader. There is no Prime Minister, President, or Dictator in a Panarchy. The power to make decisions is spread across the entire population in the form of a direct democracy.

While it might seem counterintuitive to lack a central leader or face of a nation, in panarchy, the lack of a central leader opens the door for natural leaders. We already have natural leaders in Western democracies, but their power is limited to the influence they will have in panarchy. For example, Elon Musk is a perfect example of a natural leader. He is not elected by the people, but by the sheer brilliance of his ideas, he has a massive following. Elon Musk has incredible power to influence in a democracy, but in a panarchy, characters like Elon Musk or Steve Jobs will have the power of a president. I will discuss later how these natural leaders will create power in panarchical nations.

By the very nature of a Utopia Plus model Panarchy, if everyone has reached self-actualization, will society still need political leaders? If everyone in a society has a high level of self-command and moral sentiments, why would we need a President? The question becomes, will there be a need for any leadership in a society which has adopted panarchy? The answer to this question is yes. There will be political leaders in panarchy. But the way they create their own legitimacy will be very different than today's leaders. For any leader, one of the most important factors in effective leadership is maintaining legitimacy.

Legitimacy is like a currency for leaders. They use it as a persuasive power over their

followers. Without legitimacy, a leader is no more than a lone wander in the desert. According to the Stanford Encyclopedia of Philosophy, “Locke's starting-point is a state of nature in which all individuals are equally free in the sense that they possess equal political authority.” In a state of Panarchy, we have an equal political authority, but their legitimacy will come from a different source.

In the Medieval Ages, if a leader wanted to have a strong legitimacy, the person would need to prove herself or himself in battle. Physical strength and good swordsmanship was a good pathway to legitimacy. Conquest was the nature of the game. War, battle, and supremacy were all necessary actions for an aspiring political leader to partake in if they wanted a shot at one day becoming a king or head of state.

As war technology advanced, physical strength and swordsmanship no longer had the type of legitimizing force it once did. Kings riding into battle were no longer seen as a powerful when everyone had guns. Instead, the notion of a general, or someone who had the smarts to outwit the enemy in battle started to become the norm. George Washington rallying his troops in battle still had a place for legitimacy, but it was a shift in how leadership worked in society. Old age started to become a way for leaders to play the "wise" card. When President Bill Clinton was a young man, he said he couldn't wait for his hair to turn grey because people would take him more seriously.

Today, leaders are rarely on the battlefield. Tom Cotton, the senator from Arkansas, used his battlefield experience in Iraq to claim legitimacy for a run for the senate, but battlefield experience doesn't have the impact like it used to, and no one was calling for Tom Cotton to run for President. In fact, there were many stories written about President Trump allegedly dodging the draft. Whether those stories are true or not, it didn't matter because battlefield experience is

no longer necessary to be a political leader.

In the 21st century, the main pathway to leadership is the election. In the past, a revolution was the pathway to leadership or being born into a royal family. Elections are the most common way for leaders to gain legitimacy. Instead of conquering territories, they are battling for votes. President Trump gained his legitimacy by winning votes in the battleground states. Senators gain legitimacy by winning votes in their states.

In the 24th century, there will be very few elections. Panarchy will eliminate elections power to legitimize leaders, just as Democracy removed the legitimizing power of conquest. The ability to reshape the world by thinking outside the box will be the legitimizing power in the future.

We are already starting to see this kind of legitimizing power take root now, but it is in its infancy. Political leaders do not have to rely on thinking outside the box to gain political legitimacy, but there are business leaders who do. For example, with the invention of the iPhone, Steve Jobs, gained an incredible legitimizing force as a leader. The CEO of SpaceX and Tesla, Elon Musk, though sheer brilliance of thinking outside the box, has been able to reshape the world that has given him legitimacy. These leaders do not have the kind of power that an election would give them, but they substitute this with money. But money can only go so far, and leaders like Elon Musk or Steve Jobs will never have the power to shape society like President Trump has today. But in the future, these types of thinkers and shapers of the world with their inventions and creativity will have the power like a President in the world of Panarchy. Part of the reason for this is the technology humanity will possess will give individuals incredible power over reshaping their environment. For example, imagine a single person who has the power to construct a new city through the power of the robotic builders they control. A person could design a city on their computer and then instruct a group of robots to construct the city.

Creativity will be the currency of legitimacy like the vote is today and the battlefield of the past was. Leaders like Elon Musk and Steve Jobs will carry an incredible amount of power in the world of Panarchy. To understand this change, we must look at why elections will lose their legitimizing power. In the world of Panarchy, individuals will be incredibly independent. Individuals will have the opportunity to be far more autonomous. Technology will be able to provide food, water, and shelter for free in a society of Panarchy. They will have the ability to be completely self-sufficient from government. They will have the freedom to live their lives on their own terms. In the 24th century, 3D printing will have advanced to the point where it will be comparable to the replicator in Star Trek. A society that has successfully adopted Panarchy will not need money. But in the world of Panarchy, people will need inspiration to be creative. And leaders like Elon Musk and Steve Jobs will be the type of leader that can inspire people to be creative and reshape the world in creative ways.

For example, people who worked for Steve Jobs said Jobs would push them to design their products under incredible pressure. They would work 20 hour days to get their product out on time, and they said they loved the work. You don't see that type of productivity under the new Apple CEO, Tim Cook. Tim Cook is not the type of creative leader of the future. He might pay his designers well. But the reason why designers under Jobs worked 20 hours a day for weeks was not because they were being paid a lot of money, because they felt incredible affirmation in creating a product they knew would reshape the world. This type of affirmation and inspiration will be the currency of leadership legitimacy in the 24th century.

Chapter 3

What Will it Be Like to Live in a Panarchy?

Many citizens living in a panarchy will use technology and their freedom to explore the cosmos, create new ideas, develop advanced forms of art and games. They will color the world. Their lifespans will reach 300 years or longer. Medical technology will allow them to clone individual organs to sustain a lifespan we never thought possible.

For example, citizens in a panarchy would not be required to have a job or salary. They wouldn't even need money. All of their needs would be supplied by technology independently from the state, including food, clothing, and shelter. Their source of electricity would come from high-definition solar panels far more advanced from our solar panels of 2016. Their food would come from vertical farms allowing the person unlimited access to a food source. Their clothing and material objects would come from advanced 3D printers that could create any material object out of high-density carbon nanotubes. Their form of transportation would be in the form of compact autonomous flying drones. The citizens of panarchy would not be tied to anyone or anything. They would be free to be nomadic if they choose. Space travel will advance to the level that exploring the stars will be like crossing the ocean.

Chapter 4

Where will Panarchy exist?

Panarchy will most likely exist in the new nations off planet. The first human nations on Mars will be the most malleable to start new types of governments like a Panarchy.

Citizens of panarchial society will need to be very smart and very preceptive. The first colonists who travel to inhabit Mars will have a very high chance of meeting this standard. The idiosyncratic nature of living on a new planet will most likely inspire smart human beings to travel there. My evidence for this claim is the New World. I do not think it is a coincidence that the American Colonies were gifted with so many talented individuals at the same time. George Washington, John Adams, Thomas Jefferson, all in the same place at the same time. My view is this, the very nature of starting a life in the New World brought these great minds together. In a similar way, I think the next frontier of Mars will bring together similarly brilliant individuals who will bring about a Panarchy state.

Panarchy is a progression from previous forms of government. New forms of government tend to be a product of new nations. Our current form of democracy is a result of the American Revolution against monarchy. While a revolution could certainly bring rise to a Panarchy on Mars, this is not a necessary condition.

The high demands of living on a planet like Mars will make it very hard for insecure individuals to survive. Nations of Mars will most likely adopt very high moral standards, far exceeding the moral standards in the 21st century. The ability for one human being to inflict massive damage on humanity will be much higher in the 24th century based on advancements in military technology. Without high moral standards, nations on Mars will not be able to survive. For example, the notion of sending people off to prison will not likely be an

option. Rapist and Murders will most likely be killed or sent back to Earth. Thieves will also be sent back to Earth because there will be no excusing conditions for stealing in a state of Panarchy. Today, we can think about all kinds of excusing conditions for stealing. For example, after Hurricane Katrina, families looted stores for food to survive. But for a Panarchy, the technological development will be so high, there will be no reason to steal things without malicious intent. There will be no room for criminals in these new Panarchial societies.

Nations on planet Earth are already too besotted with fitting-in. They will stick with traditional forms of government like socialism or democracy. Even in the 24th century, nations on Earth might adopt policies from Panarchial states, but it will be very hard to wash away hundreds of years of tradition without a major revolution or catastrophe.

Chapter 5

When will Panarchy start?

Panarchy will most likely start in the 24th century, when the first nations develop on other planets in our solar system like Mars or Jupiter's moon of Europa.

Matt Williams at Universe Today is just one of many authors who wish to contextualize colonizing other planets. "They also drafted plans to colonize Europa, which called for igloos to be established on the surface. These would serve as bases for scientists who then drill down into the European ice crust and explore the sub-surface ocean. This plan also discussed the possible use of "air pockets" in the ice sheet for long-term human habitation (Williams 2016)."

For example, there was enough political oxygen for the American Revolution based on the distance between the United Kingdom and the United States. New forms of government need extra space to grow and develop their own mythology. The physical space between Earth and new nations forming on Mars will be enough to develop Panarchy.

Chapter 6

Why is Panarchy better than Democracy?

Panarchy is not necessarily better than Democracy. In the 21st century, Democracy is better than Panarchy because Democracy is better at creating a stable society with an insecure population. But with a secure population, Panarchy is better than Democracy.

Parliamentary governments are often more effective in unstable nations in the 21st century. The governmental structure is simply a reflection of society and social trust. Panarchy is a form of government that suits populations with very high social trust and security.

Chapter 7

What is the Foundation of Panarchy?

Right now, the majority of our power comes from dead plants and animals in the form of fossil fuels and coal. But after Age 11, human beings will enter a new form of civilization. Human beings will colonize other planets, but the dangers and environmental hazards will be so high on these planets, society will have to reconfigure itself in a dramatically new way. For example, the types of behaviors we allow on planet Earth, will be too dangerous to be allowed on a Martian colony. If an individual breaks the code of society like killing someone, they will not be able to survive or be trusted in these new environments on other planets. As technology becomes more advanced, it also empowers individuals to do more harm to other. Imagine an evil person on Mars, who wishes to blow up an entire colony. They could do so much more damage to the humans living there than they could living on Earth. We will not be able to tolerate these kinds of individuals and put them into prisons like we would on Earth. The dangers of living on a different will require those colonies to adopt new laws and policies that ensure the safety of the colony.

It will be similar to the measures adopted with human beings moved to the new world. A government with a monarchy would not work in the harsh environments of the new world. Human beings figured out that democracy was the best direction to go. But on these new planets, human beings will face the fact that they will not be able to survive if fitting-in and self-deception are widespread among the population.

Human beings who are self-deceived or only fit-in on planetary colonies will be so dangerous to the society, either they will need to go back to planet Earth, or be killed. The demands of a higher conception of the self will be needed on these planets. As a consequence,

we will get societies that have higher conceptions of the self at these colonies than we'll ever get on planet Earth.

Technology has been instrumental in pushing human potential since the creation of fire tools and that is probably not going to stop in the foreseeable future. There are some roadblocks that are in store. If you look at animals, there is always a carrying capacity. A population capacity for the species and once they reach those limits they start to die out. With human beings, we have always had a steady increase in our population sizes since the start of civilization and the first age. Through the progression of technology it has given us a wonderful means of steady increase in our population. At the end of the day, that is the end goal, it's a biological goal, a biological achievement to create a larger population. If we didn't have the technological innovation, tools, cars, trucks, the ability to refrigerate, if we were not able to have massive farms and have the efficiencies that technology brings, there would be a carrying capacity on the human population. You would not see the type of exponential growth in the human population that we have seen over the past ten millennia. I argue that the population size will continue to increase, human beings will continue to use technology to increase the population size. I do not think there is a hard limit on the carrying capacity on how big the human population can get on the planet. One of the main function of technology is to enable larger population sizes, and once technology is introduced and is supporting a larger population size, you can't go back. You can't remove the technology that is facilitating the larger population size because the efficiencies are too great. To say we would go back an age, right now we are in the information age, we have really gotten out of the industrial age. To go back, it would be biologically implausible to go back. You could always have a catastrophe, like a nuclear weapons explosion, that may send the human population back to a previous age, but without a

major catastrophe, it is going to be very hard to send us back. There are all kinds of benefits of larger populations. Larger populations give tremendous incentives to create new forms of technology and solutions to old problems like vaccines or modern medicine. It is like a rollercoaster. The chain on the rollercoaster is pulling the roller coaster up the hill, and as it gets higher, there is a mechanism that locks the roller coaster into place if the chain were to break so it doesn't roll backwards.

Even as the population sizes increases, the quality of those populations are in decline. One of the major signs to this is the family size. This can be taken as a good sign and a bad sign, but I think it is both. In Western countries, many families used to have 15 children. In the future, families will only have one or two children, and the question that presents itself is why have we seen that? What I think part of the answer to this question is, it is a lot harder to develop human beings in our current social environment, and because we have such massive population you can only raise one or two children who are going to be successful. The monetary cost to raising 15 children and sending them all to college, and to foster creativity, to have the them become successful costs a lot of money. A large family today would be a tremendous monetary drag on the flourishing of the family. Today, evening raising two children is becoming a challenge, but raising 15 kids in our world with the technology we have is really off the table. As technology has become more advanced, it has automated and made a lot of simple tasks that simple human beings could do out of the question- the notation of being a simply human being and having simple thoughts is making a lot of people scared and creating a lot of anxiety. Factory workers who bent a piece of steel for 30 years and did a repetitive task will not have a job in the modern economy. Maybe it will come back in a different form, but even if it does in the next 20 years, robotics and more advanced manufacturing technologies will replace that person eventually.

With 3D printing, technology has become more accurate than a set of human hands. Hands are not a proper tool to manufacture, the precision needed to manufacture new tools of the 21st century like iPhones or Laptops, or even other robots. That is going to be a major hurdle in the 21st century. I think the quality of individuals is going to be reflected in the lack of gigantic families. Also it is a bad sign because in previous ages, you would be able to foster that type of large family and have everyone be successful and it wouldn't be a major question.

No doubt, there are many inventions and gadgets that do not help the advancement of human society. There is technology what I will call “Majestic Innovations” that are like a bridge to a new world. The technologies outlined in the graph of “The Rise of Panarchy” are such examples. They give us the tools to build new worlds. At the same time, there are “Crude Technologies” that are created without thought of purpose and only serve to underwrite the bad nature of human beings. For example, the latest messaging apps help destroy genuine social interaction without helping humanity forward. In Charles Hampden-Turner book, *The Radical Man*, he outlines a perspective of the physiological profile of how society viewed a human being and what effect that had on their conception of the self in the 20th century and compares it with a profile of the free man of the future. Hampden-Turner's book creates an optimistic vision of the future. But the problem with the Radical Man is the self-command needed in order to achieve this higher level of self. Unfortunately, as human beings adopt more crude technology in order to facility their own self-deception, they will fail to achieve this higher conception of the self. Human beings are motivated to engage in self-deception because of their own insecurities. Without the sufficient affirmation to anchor a human being's conception of the self, a person can become very insecure. Insecurity opens the door to self-deception. There is one aspect to the radical man that is essential for its success, and this aspect is overlooked by Hampden-Turner

and that is - creativity. In step d, a human being cannot, “Invest with intensity and authenticity in his human environment,” without creativity. As majestic technology starts to replace activities that human beings once found affirming, creativity will be a requirement in order to flourish. Today, it would be unwise to be optimistic that human beings are going to be creative all of a sudden. Creativity today is a gift. However, tomorrow creativity will be a requirement like reading and writing. How we prepare our populations for the need for creativity will be hard.

The problem with panarchy is it requires the vast majority of people in the society to have a level of moral majesty that might be impossible based on our current knowledge of human beings.

Chapter 8

Should we be Optimistic?

Technology has become a barrier to social interaction. We have a paradox at play, we need technology to facilitate an increase in population size, yet we have to maintain a quality level of individuals that can maintain a vibrant political structure. In the future, the population size might not have to increase and in fact may decrease. The vibrant political structure has the responsibility to prevent evil. A blind adoption of radically new technology, can result in collapse in human civilization. The Nazi's were very technologically advanced, we did win WWII technologically with the intentional of nuclear weapons. But they were the first country to push technology and use it in a evil way.

As reference to the Rise of Panarchy figure, the first circle is the start of human civilization in the State of Nature. In the State of Nature, and as human beings evolved, we developed our baseline configuration as social creatures. Over millions of years, our biology allowed us to flourish in the State of Nature. We should strive to maintain the intricacies of the State of Nature in our current society. For example, the State of Nature allowed human beings to exercise and engage in genuine social interaction on a daily basis. As a result, human beings do not flourish in environments that lack genuine social interaction or exercise. Technology gives human beings the power to create environments that do not allow for exercise or genuine social interaction, but we should be careful not to create those environments. This is not the first time we have used technology to create negative environments.

With the development of alcohol in the first human civilizations, we opened the door for allowing unhealthy human beings to exist in society. During the State of Nature, human beings would exercise on a regular basis and did not have access to alcohol. People had to run miles

everyday and give one another affirmation on a regular basis. In the State of Nature, we had an absolute stable social structure. When society has a unfettered access to unlimited reproduction, it creates an unstable social structure. To compensate for the instability and fragility of the social structure, human beings form governments, form power centers, to act as a brain for the civilization. In the State of Nature, we don't have the luxury of outsourcing major decisions to others, everyone exists in one anarchy.

Part of what it means to be human is the ability to navigate. All life is trying to navigate at the lowest common denominator. Technology aids in navigation, but today it is becoming far more difficult to navigate the waters of civilization when there are not as many opportunities that technology has not already automated. We are going to need to deal with some insecurities. We need to change the mindset of how we give one another affirmation. There is going to be a lot of job growth in the arts and expression. We need to change what is a worthy job. We have seen a collapse in affirmation. Why have we seen a collapse in affirmation? It might be because culture in some way is a realization, an explanation, and an excuse for the social structure that adheres to the technological innovations that allows for larger populations. People used to receive a lot of affirmation for being a farmer, later it was a factory worker. Affirmation was given for things that added value to the social structure, and 500 years ago, it was making clothes. So culture is a way of giving affirmation to those who are completing tasks. However, the tasks that are needed to be completed today in order for the stability of human civilization are going to be the creative tasks, arts, video game design, and expression. There are video games that take 10,000 people to make, but it will be a shift away from office work and the management of data. There are two reasons why I have circles in the graph of The Rise of Panarchy. One, to explain the larger and larger population sizes that have been allowed to grow based on technological innovation.

I believe each circle can also represent a political line. Most people see politics in a political line divided into left and right, but we can also see this same political line bent into a circle. If you go to the extreme left and the extreme right, they often do the same sorts of political actions. For example, Communist Russia on the far left and Authoritarian German on the far right both killed millions of their own people, ruled with an iron fist, and made their nations very unstable, even though the political ideology driving these societies were polar opposites. If you have an extreme right authoritative government and you have an extreme left communist government, even though they have polar opposite viewpoints, they do some similar actions of oppressing the press, having political prisoners, and using violence against the people. We can map these political ideologies as a circle. My point is this - as we get larger and larger population sizes, that political line is bigger as well, and it is harder to have more moderate voices and maintain a stable social structure. We need courage to build the future of tomorrow. Neil Degrasse Tyson, says in his book, *Space Chronicles*, “Advances don’t fall from the sky. Clever people think them up. The problem is that turning a clever idea into reality takes lots of money. And when market forces shift, those somebodies may lose interest and the checks may stop coming. If computer companies had stopped inventing in 1978, your desk might still sport a hundred pound IBM 5110.” In the year 2016, we don’t build majestic innovations like we used to, and without new progress, society will stagnate.

One of the reasons why we don’t is the United States does not have a competitor like the Soviet Union. The Soviets pushed the United States into landing a man on the moon. Without Sputnik, there is very little likelihood that anyone would have taken the idea of landing a man on the moon seriously. But in the state of Panarchy, we won’t need competition between nations because technology will give individuals the power to reshape the world.

Works Cited

- Andrew, Elise. "Robots Could Use 3D Printing To Build Mars Bases Before Astronauts Arrive." IFLScience. IFLScience, 15 Aug. 2016. Web. 23 Apr. 2017. <<http://www.iflscience.com/space/robots-could-use-3d-printing-build-mars-bases-astronauts-arrive/>>.
- Brynjolfsson, Erik, and Andrew McAfee. *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. New York: W.W. Norton, 2016. Print.
- Däniken, Erich Von. *Chariots of the Gods?: Unsolved Mysteries of the past*. New York: G.P. Putnam's, 1970. Print.
- Goffman, Erving. *The Presentation of Self in Everyday Life*. Print.
- Hampden-Turner, Charles. *Radical Man*. (London): Duckworth, 1971. Print.
- Nye, Joseph S. *The Future of Power*. New York: PublicAffairs, 2011. Print.
- Peter, Fabienne. "Political Legitimacy." *Stanford Encyclopedia of Philosophy*. Stanford University, 29 Apr. 2010. Web. 23 Apr. 2017. <<https://plato.stanford.edu/entries/legitimacy/#JusPowCrePolAut>>.
- Puydt, Emile De. *Panarchy*. 1860. Web. <<https://www.panarchy.org/depuydt/1860.eng.html>>.
- Ramo, Joshua Cooper. *The Seventh Sense: Power, Fortune, and Survival in the Age of Networks*. Print.
- Steele, Robert David. *The Open-source Everything Manifesto: Transparency, Truth, and Trust*. Berkeley, CA: Evolver Editions, 2012. Print.
- Toffler, Alvin. *The Third Wave*. New York: Morrow, 1980. Print.
- Tyson, Neil DeGrasse, and Avis Lang. *Space Chronicles: Facing the Ultimate Frontier*.

Print.

Williams, Matt. "How Do We Colonize Jupiter's Moons?" Universe Today.

Universe Today, 27 Nov. 2016. Web. 23 Apr. 2017.

<<https://www.universetoday.com/130637/colonize-jupiters-moons/>>.